REMARKS

Claims 1-19 now stand in the application, new claims 8-19 having been added. Reconsideration of the application and allowance of all claims are respectfully requested in view of the above amendments and the following remarks.

The Patent Office objects to claims 3, 4, 6 and 7 as being dependent upon a rejected base claim. Claim 8 corresponds exactly to claim 3 rewritten in independent form, with claims 9-13 dependent thereon. Accordingly, allowance of claims 8-13 is respectfully requested.

Claims 1 and 2 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Beshai *et al.* (U.S. Patent No. 6,882,799). Claim 5 stands rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Beshai *et al.* in view of Kirby (U.S. Patent No. 6,647,208). These rejections are respectfully traversed.

The present invention is a method of detecting switching subnodes in a monoblock WDM optical switching network, with each subnode corresponding to a given level of granularity and a given switching function. The method starts by first collecting information concerning how traffic is crossing an initial monoblock switching node, and an example of this is described at the top of page 7 of the specification. The second step in the process is to define the granularity and switching function of the subnodes to be detected, and an example of this is described beginning at line 16 of page 7 of the specification. After these collecting and defining steps are performed, the method of the invention considers each subnode successively in an order corresponding to reducing switching constraints, and for each subnode, selects all or part of the traffic of an incoming granularity and an outgoing granularity that satisfy the switching constraints of the

subnode concerned. An example of this process is shown at steps E1 through E10 in Figs. 5A and 5B.

Beshai et al shows a multigrained network. In the discussion from line 45 of column 14 through line 18 of column 15, Beshai et al describes the process followed on receiving a connection request. This involves consulting forwarding tables (e.g., Fig. 11, described at lines 25-54 of column 12) to determine to which output port 445 of an ingress module 200 the connection should be routed. The output ports 445 of the ingress module are preferably arranged in descending order of granularity to ensure use of the coarsest paths first. The connection is then routed taking into account available capacities.

There is a certain knowledge of the structure of the switching node and connection paths through the switching node that is inherent in the ability of Beshai et al to implement its routing decisions. This would include, for example, the granularities of the subnodes. The examiner has pointed to Beshai's comment about different granularities, and follows that with the conclusion that it would therefore have been obvious to define granularity and switching function. This is a non-sequitur. Beshai et al does not appear to discuss including different switching functions in its definition of subnodes, only granularity. Thus, claim 1 is not rendered obvious by the teaching of Beshai et al.

Claim 14 has been added to further define the switching function aspect of claim 1, consistent with the description at page 8 of the specification. This is neither shown nor suggested in Beshai et al.

According to the present invention, there are recognized switching constraints imposed, and the third step of the claimed method is to consider each subnode successively in an order

corresponding to reducing switching constraints. An example of a constraint is discussed at page 8 of the specification. The process of successive consideration of the subnodes is described beginning at page 11 with reference to Figs. 5A and 5B. The constraint in this non-limiting example is that no traffic can be generated internally between subnodes of the same granularity. A related aspect of this constraint is that the method cannot switch one portion of a multiplex with wavelength translation and another portion of the same multiplex without wavelength translation. So in making its switching decisions, the method first looks to see if the entire multiplex can be switched without translation, and if this is not the case, then it looks at band level switching without translation, then band level switching with translation, then wavelength level switching.

Beshai et al considers nodes in order of granularity to ensure that the coarsest switching is done. But the only discussion of switching constraints in Beshai et al is based on capacity. Capacity is not an effective constraint to use in determining an order in which subnodes are *considered*, it being preferable to *consider* first the optimum routing independently of capacity and then implement that if the capacity permits. This distinction between the constraints considered in the present invention and the capacity consideration in Beshai et al has been highlighted by the addition of new claim 15, and by the more detailed recitation of switching constraints in new claims 16 and 17.

New claim 18 has been added to describe the sequence of subnode considerations in broader terms than original claim 3, and is believed to distinguish over the applied art for all of the reasons discussed above.

For the above reasons, and in light of the clarifying amendment made to the claims, it is submitted that the method taught by Beshai et al is clearly different from that of the present invention, and that the claimed invention would not have been an obvious modification of what is taught by Beshai et al.

The secondary reference to Kirby does not supply the teaching missing from Beshai et al as discussed above.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

David J. Cushing
Registration No. 28,703

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE
23373
CUSTOMER NUMBER

Date: November 22, 2005